



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,250	07/16/2003	Dong Hwan Lee	CU-3300 RJS	1267
26530	7590	07/27/2007		
LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604			EXAMINER MOON, SEOKYUN	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/621,250

Applicant(s)

LEE ET AL.

Examiner

Seokyun Moon

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 14 is/are rejected.
- 7) ☒ Claim(s) 1, 3, 5, 13 and 15-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawing Objection

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Claim 13 discloses, “a count section for generating a count value by counting the number of transitional edges of a vertical synchronous signal” and “a control section for calculating a plurality of parameter values on the basis of the number of data driver ICs and the number of gate lines, comparing the count value counted by the count section with the calculated parameter values, and controlling the reference data generation section to select and output one of the plurality of reference data with reference to the look-up table according to a result of the comparison”. According to the claim limitation mentioned above (emphasis on the underlined part), the control section is the device which interfaces with the counter section, the look-up table, and the reference data generation section. However, fig. 13 shows that the counter section is the device which interfaces with the reference data generation section and the look-up table.

The claim limitation must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Appropriate corrections/explanations are required.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

Art Unit: 2629

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objection

2. **Claims 1, 2, 13-14, and 18** are objected to because of the following informalities:

As to **claim 1**, the claim discloses, "*A liquid crystal display device comprising*".

However, all of the claims depending on claim 1, i.e. claims 2, 3, and 5, disclose, "*A liquid crystal driving device as claimed in claim 1*".

To be consistent with the dependent claims, the claim limitation, "*A liquid crystal display device comprising*" of claim 1 will be interpreted as "*A liquid crystal driving device comprising*".

Appropriate correction is required.

As to **claim 2**, the claim discloses, "*a pulse width of the vertical start signal*", "*generating location data of the pertinent gate driver IC*", and "*a Carry signal*".

However, all of the claim limitations mentioned above, "*pulse width*", "*location data*", and "*carry signal*", are already disclosed in claim 1 on which claim 2 depends.

For further examination purpose, the claim limitations will be interpreted as, "*the pulse width of the vertical start signal*", "*generating the location data of the pertinent gate driver IC*", and "*the Carry signal*".

Appropriates correction are required.

Art Unit: 2629

As to **claim 13**, the claim discloses, “a liquid crystal panel including a plurality of signal line patterns to a apply a data signal” and “a look-up table for storing a plurality of reference data corresponding to the number of gate driver ICs”.

However, Examiner respectfully submits that the plurality of signal line patterns apply a plurality of data signals rather than a single data signal. Also, the claim limitation, “gate driver ICs” disclosed above, is already disclosed in the claim previously.

For further examination purpose, the claim limitation will be interpreted as, “a liquid crystal panel including a plurality of signal line patterns to apply data signals” and “a look-up table for storing a plurality of reference data corresponding to the number of the gate driver ICs”.

Appropriate corrections are required.

As to **claim 14**, the claim discloses, “a pulse width of the vertical start signal”, “generating location data of the pertinent gate driver IC”, and “a Carry signal”.

However, all of the claim limitations mentioned above, “pulse width”, “location data”, and “carry signal”, are already disclosed in claim 1 on which claim 2 depends.

For further examination purpose, the claim limitations will be interpreted as, “the pulse width of the vertical start signal”, “generating the location data of the pertinent gate driver IC”, and “the Carry signal”.

As to **claim 18**, the claim discloses, “wherein the gate-off voltage generation means subtracts voltage attenuation quantity corresponding to location data of the pertinent gate driver IC from an inputted gate-off voltage, ...”.

However, the claim limitations, “location data” and “an inputted gate-off voltage” are already disclosed in claim 13 on which claim 18 depends on.

Art Unit: 2629

For further examination purpose, the claim limitation will be interpreted as “*wherein the gate-off voltage generation means subtracts a voltage attenuation quantity corresponding to the location data of the pertinent gate driver IC from the first gate-off voltage, ...*”.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 2 and 14** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims disclose, “*a pulse width changed on the basis of a value of location data of the pertinent gate driver IC*”.

However, according to claims 1 and 13 on which claims 2 and 14 depend on, the value of the location data changes depending on the pulse width of a vertical start signal rather than that the value of the pulse width changes depending on the value of location data [claim 1: lines 3-6 and claim 13: lines 2-5]. The value of the pulse width merely depends on the location of the gate driver IC.

As best understood by the Examiner, the claim limitation will be interpreted as “*a pulse width changed on the basis of the location of the pertinent gate driver IC*” for further examination purpose.

Appropriate correction/explanation is required.

Art Unit: 2629

Conclusion

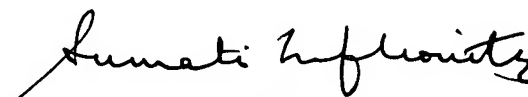
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 23, 2007

- s.m.



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER